



Great Lakes Works

Environmental Dept.
No. 1 Quality Drive
Ecorse, Michigan 48229

September 14, 2018

EES Case Management Unit
Environmental and Natural Resources Div.
U. S. Department of Justice
Box 7611
Washington, DC 20044-7611

Eric Cohen
Office of Regional Counsel, C-14J
US EPA, Region V
77 West Jackson Blvd.
Chicago, IL 60604

Compliance Tracker (AE-17J)
Air Enforcement and Compliance Assurance
U. S. Environmental Protection Agency
Region 5
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Chicago, IL 60604

Neil D. Gordon
Michigan Dept. of Attorney General
Environment, Natural Resources, and
Agriculture Division
P. O. Box 30755
Lansing, MI 48909

Wilhemina McLemore
Michigan Department of Environmental Quality
Air Quality Division
Cadillac Place, Suite 2-300
3058 W. Grand Blvd – Suite 2-300
Detroit, Michigan 48202-6058



Sir/Madam:

Re: *United States, et al. v United States Steel Corporation*
Consent Decree 2:12-cv-304, DJ# 90-5-2-1-06476/1
United States Steel Corporation – Great Lakes Works
2018 1st Semi-Annual Report (January 1, 2018 through June 30, 2018)

Pursuant to Paragraph X.60. of the above-referenced Consent Decree, U. S. Steel is submitting the 2018 1st Semi-Annual Report for the above-referenced Consent Decree. Please refer to the following attachments:

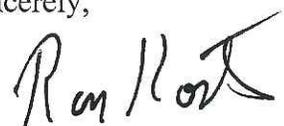
- Section 1 – Blast Furnace Bell Inspection
- Section 2 – Section V, VII, and VIII Compliance Updates
- Section 3 – No. 2 BOP Shop Roof Visible Emission Observations

If you have any questions regarding this matter or require additional information, please contact Alexis Piscitelli at 313-749-3900 or apiscitelli@uss.com.

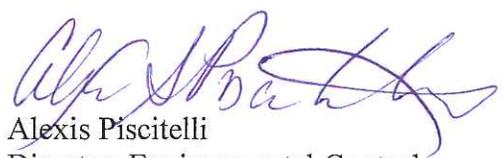
Patrick

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

Sincerely,



Ron Kostyo
General Manager, Great Lakes Works
Great Lakes Works
United States Steel Corporation



Alexis Piscitelli
Director, Environmental Control
Great Lakes Works
United States Steel Corporation

cc: David Hacker (USS)

attachments

Section 1

B2 Quarterly Large Bell Inspection

The large bell inspections for B2 Blast Furnace for January through June 2018 can be found on the following page. No issues were found during the inspections.

B2 Quarterly Visual Inspection of Large Bell

Required to be Conducted every Quarter in Accordance with USEPA Consent Order

Conduct Visual Inspection of Large Bell, Circle Yes or No

- | | | |
|---|--------------------------------------|----|
| Is the large bell free of visible holes? | <input checked="" type="radio"/> Yes | No |
| Is the large bell free of visible gouges? | <input checked="" type="radio"/> Yes | No |
| Is the large bell free of visible cracks? | <input checked="" type="radio"/> Yes | No |
| Is the large bell free of excessive wear? | <input checked="" type="radio"/> Yes | No |
| Is the large bell seated properly? | <input checked="" type="radio"/> Yes | No |

If any Area above is marked No, Describe the Condition

<i>Bell looks good & seals</i>

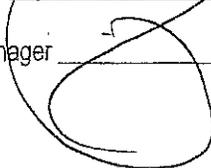
For Conditions Described Above, Describe Corrective Action Taken and Timing of Corrective Action

<i>N/A</i>

Name of Inspector Trenton Pillov

Date of Inspection 1-18-18

Signature of Inspector 

Signature of Area Manager  2/1/18

B2 Quarterly Visual Inspection of Large Bell

Required to be Conducted every Quarter in Accordance with USEPA Consent Order

Conduct Visual Inspection of Large Bell, Circle Yes or No

Is the large bell free of visible holes?

Yes

No

Is the large bell free of visible gouges?

Yes

No

Is the large bell free of visible cracks?

Yes

No

Is the large bell free of excessive wear?

Yes

No

Is the large bell seated properly?

Yes

No

If any Area above is marked No, Describe the Condition

N/A

For Conditions Described Above, Describe Corrective Action Taken and Timing of Corrective Action

N/A

Name of Inspector IRVING HARVEY

Date of Inspection 5-10-18

Signature of Inspector [Signature]

Signature of Area Manager [Signature]

Section 2

Section V Compliance Update

The Third-Party Study was provided to US EPA and MDEQ in December 2017. To execute the actions outlined in that study; and in preparation for the BOP Outage that is planned for the 2nd half of 2018, U. S. Steel began to order the required replacement parts and work with third-party contractors to plan and develop the work schedule.

Section VII Compliance Update

The City of Detroit Roadside Vegetative Particulate Buffer Project SEP has completed 2 of 3 parks. The following is a list of the parks, contractors chosen, and completion dates:

1. Beard Park: Greening of Detroit – Installation completed May 31, maintenance ongoing
2. Kemeny Park: Backer Landscaping – Installation completed June 26, maintenance ongoing
3. Riverside Park: W. H. Canon – Installation expected to be completed by late September 2018.

Upon completion of the Riverside Park vegetative buffer project, U. S. Steel will submit the Roadside Vegetative Particulate Buffer SEP completion report as required by Paragraph 47 and Section III.F of Appendix A of the Consent Decree.

The Lighting Ballasts and Light Bulb Replacement SEP progression has slowed as it was found that there were very little PCB-containing lighting ballasts or bulbs remaining in the areas that were specified in the Consent Decree. Elevate Energy performed an inventory of the target areas and the Ecorse, River Rouge and Southwest Detroit Area schools all reported having no PCB-containing lights remaining in their school buildings. U. S. Steel and Elevate Energy promptly shared this information with Jon Grosshans of the US EPA and requested guidance on how to proceed. We were asked to expand the target area to include all of Detroit schools. In doing so, Elevate Energy located approximately \$50,000 worth of PCB-containing lights that could be replaced, leaving a significant gap to the target. This information was once again shared with Mr. Grosshans. We have now been asked to expand the target search area to include a wider variety of buildings within the Detroit area not necessarily related to schools, but still likely places where children visit. In light of the school districts advising U. S. Steel that the PCB-containing lights had previously been removed which resulted in an unexpected change in the scope of the project, and because no alternative has been identified or approved yet, at this time, U. S. Steel anticipates that a modification/extension for the SEP completion date will likely be necessary and pursued per Section XX of the Consent Decree. U. S. Steel will continue to work with US EPA and MDEQ on the path forward.

Section VIII Compliance Update

U. S. Steel has also identified and is in preparation of removing and replacing 3 PCB transformers from the Great Lakes Works facility in late 2018 and early 2019 to comply with the Section VIII requirement.

Section 3

No. 2 BOP Roof Monitor Visible Emission Observations

All field sheets used during any certified Visible Emission Observation from January 2018 through June 2018 can be found on the following pages.

Below you will find the descriptions of any deviation from opacity standards for the No. 2 BOP Shop Roof and any steps taken to, or to be taken, to prevent or minimize such noncompliance.

January 5, 2018

On January 5, 2018, GLW incurred three 3-minute average opacity readings at the BOP Shop Roof Monitor of 27.1%, 25.4%, and 22.9%.

Incident Cause

From 1:28 pm to 1:31 pm, excess emissions were observed escaping from the 26 Vessel sand seal. A steam leak near the sand seal on 26 Vessel caused the material used for the seal to prematurely fail.

From 1:34 pm to 1:40 pm, excess emissions were observed exiting from the center and east sections of the BOP roof. 25 Vessel was charged with hot metal from 1:32 pm to 1:35 pm.

Corrective Actions

Temporary repairs were immediately made to the 26 Vessel sand seal and the steam leak was repaired on January 9.

The secondary capture system dampers were verified to be in the correct position during the problematic charge on 25 Vessel, as was the pour duration. During the next scheduled down day, an inspection on the secondary ductwork revealed some deterioration on the 26 Vessel louvers that was effecting the draft off 25 Vessel during charging. Permanent repairs are being completed during the August and September outages.

February 1, 2018

On February 1, 2018, GLW incurred one 3-minute average opacity readings at the BOP Shop Roof Monitor of 45.8%.

Incident Cause

The elevated opacities occurred when emissions from charging on 25 Vessel escaped from the capture hood.

Corrective Actions

GLW visually inspected the 25 Vessel and 26 Vessel secondary emission louvers from inside the ductwork during the down day February 6 and conducted interior observations on various levels within BOP Shop during 25 Vessel charges. The inspection on the secondary ductwork revealed some deterioration on the

26 Vessel louvers that was effecting the draft off 25 Vessel. Permanent repairs are being completed during the August and September outages.

March 29, 2018

On March 29, 2018, GLW incurred one 3-minute average opacity reading at the BOP Shop Roof Monitor of 26.7%.

Incident Cause

During a blow on 26 Vessel emissions were observed escaping from the west end of the BOP Shop Roof. Upon investigation, it was found that there were some holes in the 26 boiler door sides.

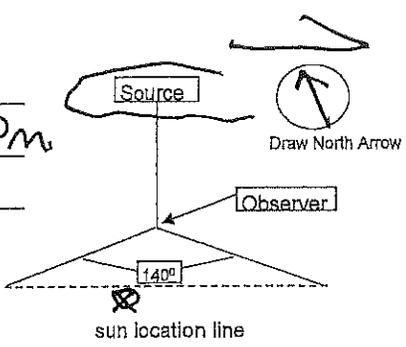
Corrective Actions

The boiler door was repaired.

Visual Determination of Opacity

DATE 1-5-18
 Start Time 12:25 P.M. End Time 1:55 P.M.
 LOCATION M.P. USS GLW
 OBSERVER'S LOCATION SE 150 YDS FROM BOP

ACTIVITY #2 BOP SHOP ROOF
 OBSERVER S. Kristjok - Vodka water
 Wind Direction and Speed 10-20 Sky Condition SUNNY Temp: 6°
 Comments:



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						12:30	30	0	0	0	0	
	1							31	0	0	0	0	
	2							32	0	0	0	0	
	3							33	0	0	0	0	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
	10							40	0	0	0	0	
	11							41	0	0	0	0	
	12							42	0	0	0	0	
	13							43	0	0	0	0	
	14							44	0	0	0	0	
	15							45	0	0	0	0	
	16							46	0	0	0	0	
	17							47	0	0	0	0	
	18							48	0	0	0	0	
	19							49	0	0	0	0	
	20							50	0	0	0	0	
	21						12:51	51	0	0	0	0	START BLOW
	22							52	0	0	0	0	25-5909
	23							53	0	0	0	0	
	24							54	0	0	0	0	
2:25	25	0	0	0	0	TAP 26-7401		55	0	0	0	0	
	26	0	0	0	0			56	0	0	0	0	
	27	0	0	0	0			57	0	0	0	0	
	28	0	0	0	0			58	0	0	0	0	
	29	0	0	0	0			59	0	0	0	0	

Visual Determination of Opacity

FACILITY
2 BOP SHOP ROOF

OBSERVER
S. Kuyshyob - Vashia water

Wind Direction and Speed
W 10-20

Sky Condition
SUNNY

Temp:
60

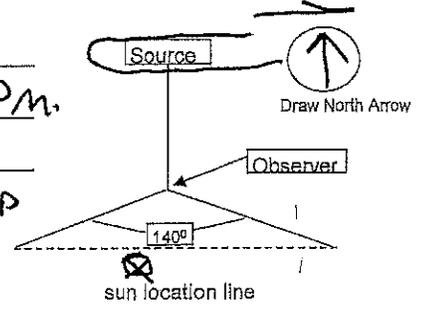
Comments:

DATE 1-5-18

Start Time 12:25 P.M. End Time 1:55 P.M.

LOCATION
M.P. USS GLU

OBSERVER'S LOCATION
SE ~ 150 YDS FROM BOP

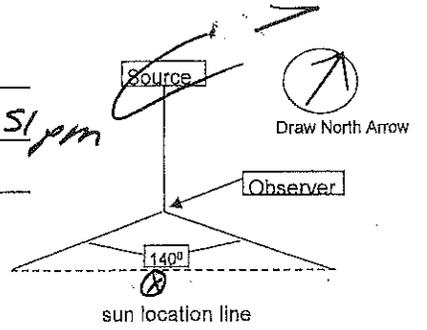


BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
12:00	0	0	0	0	0		1:30	30	20	25	35	1:28:15 - 1:31:00 27.1%	
	1	0	0	0	0			31	30	20	20	10	
	2	0	0	0	0			32	10	15	20	15	
	3	0	0	0	0			33	15	15	15	25	
	4	0	0	0	0			34	20	15	25	40	CENTER & EAST SECTION ROOF
	5	0	0	0	0			35	35	30	20	10	
	6	0	0	0	0			36	25	25	15	30	
	7	0	0	0	0			37	35	25	35	25	1:34:15 - 1:37:00 25.4%
	8	0	0	0	0			38	15	25	15	35	
	9	0	0	0	0			39	20	25	25	15	
	10	0	0	0	0			40	15	10	10	10	1:37:15 - 1:40:00 22.9%
	11	0	0	0	0			41	10	10	15	10	
	12	0	0	0	0			42	10	5	0	0	
	13	0	0	0	0			43	0	0	0	0	
	14	0	0	0	5			44	10	10	10	10	
	15	5	5	0	0			45	10	10	5	5	
	16	0	0	0	0			46	5	5	5	0	
	17	0	0	0	0			47	0	0	0	0	
	18	0	0	0	0			48	0	0	0	0	
	19	0	0	0	0			49	0	0	0	0	
	20	0	0	0	0			50	0	0	0	0	
12:21	21	0	0	0	0	TAP 25-5909		51	0	0	0	0	
	22	5	5	0	0			52	0	0	0	0	
	23	0	0	0	0			53	0	0	0	0	
	24	0	0	0	0		1:54	54	0	0	0	0	TAP 26-7402
	25	0	0	0	0	26-7402	1:55	55	0	0	0	0	END V.E.O.
1:26	26	0	0	0	0	START BLOW		56					
	27	0	15	25	25	CENTER SECTION A		57					
	28	20	20	30	35	SE CORNER 26		58					
	29	20	25	30	25	SAND SEAL		59					

Visual Determination of Opacity

FACILITY: #2 BOP Ship Roof
 OBSERVER: Paul Bush - Peoria Water
 Wind Direction and Speed: W 10-20 mph
 Sky Condition: Cloudy
 Temp: 14°F
 DATE: 1-17-18
 Start Time: 11:53 AM
 End Time: 12:51 PM
 LOCATION: MP USSGLW
 OBSERVER'S LOCATION: SE from BOP ~130 yds



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
12:00	0	0	0	0	0								
	1	0	0	0	0								
	2	0	0	0	0								
	3	0	0	0	0								
	4	0	0	0	0								
	5	0	0	0	0								
	6	0	0	0	0								
	7	0	0	0	0								
	8	0	0	0	0								
	9	0	0	0	0								
	10	0	0	0	0								
	11	0	0	0	0								
	12	0	0	0	0								
	13	0	0	0	0								
	14	0	0	0	0								
	15	0	0	0	0								
	16	0	0	0	0								
	17	0	0	0	0								
	18	0	0	0	0								
	19	0	0	0	0								
	20	0	0	0	0								
	21	0	0	0	0								
	22	0	0	0	0								
	23	0	0	0	5		11:53	53	0	0	0	0	Start VEO 11:53
	24	10	10	5	5	W Road H/M Chng	11:54	54	0	0	0	0	Tap 11:5
1:	25	0	0	0	0	Start Blow		55	0	0	0	0	26-7603
	26	0	0	0	0			56	0	0	0	0	
	27	0	0	0	0			57	0	0	0	0	
	28	0	0	0	0			58	0	0	0	0	
	29	0	0	0	0			59	0	0	0	0	

pg 1 of 2

Visual Determination of Opacity

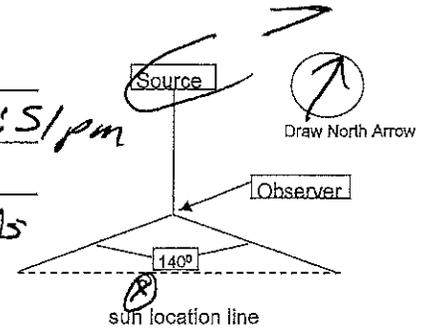
DATE 1-17-18

FACILITY # 2 BOP Shop Roof Start Time 11:53 Am End Time 12:51 pm

OBSERVER Paul Bush-Vedra LOCATION MP USSGLW

Wind Direction and Speed S 10-20 mph Sky Condition Cloudy Temp: 14°F OBSERVER'S LOCATION 52 from BOP ~ 130 yds

Comments:



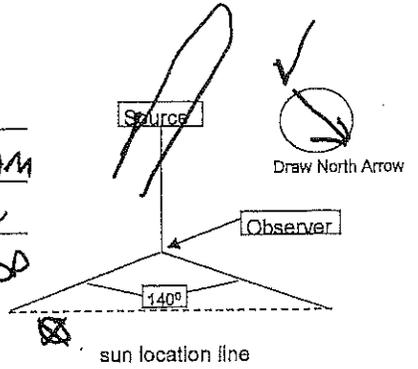
BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						12:30	30	0	0	0	0	
	1							31	0	0	0	0	
	2							32	0	0	0	0	
	3							33	0	0	0	0	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
	10							40	0	0	0	0	
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	13							43	0	0	0	0	
	14							44	0	0	0	0	
	15							45	0	0	0	0	
	16							46	0	0	0	0	
	17							47	0	0	0	0	
	18							48	0	0	0	0	
	19							49	0	0	0	0	
	20							50	0	0	0	0	End VED 11:51
	21						12:51	51	0	0			Tap 11:51
	22							52					26-7604
	23							53					
	24							54					
	25							55					
	26							56					
	27							57					
	28							58					
	29							59					

Ag 2012

Visual Determination of Opacity

ACTIVITY # 2 BOP SHOP ROOF	DATE 2-1-18
OBSERVER K. Kuytjck - Vedio wala	Start Time 10:20 AM
Wind Direction and Speed SW 10-20	End Time 11:12 AM
Sky Condition P.CLOUDY	Temp: 36°
Comments:	LOCATION M.P. USS GLW
	OBSERVER'S LOCATION NE 120 YDS FROM 2 BOP



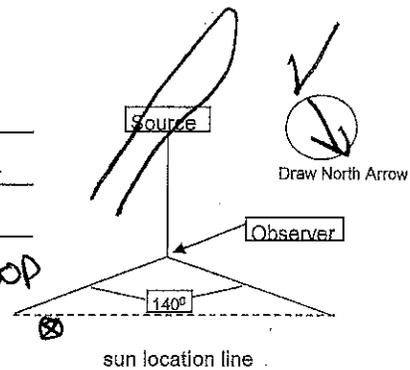
BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						10:30	30	0	0	0	0	
	1							31	0	0	0	0	
	2							32	0	0	0	0	
	3							33	0	0	0	0	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
	10							40	0	0	0	0	
	11							41	0	0	0	0	
	12							42	0	0	0	0	
	13							43	0	0	0	0	
	14						10:44	44	0	0	0	0	START BLOW
	15							45	0	0	0	0	26-7872
	16							46	0	0	0	0	
	17							47	0	0	0	0	
	18							48	0	0	0	0	
	19							49	0	0	0	0	
0:20	20	0	0	0	0	TAP 26-7871		50	0	0	0	5	CENTER
	21	0	0	0	0			51	5	5	0	0	SECTION
	22	0	0	0	0			52	0	0	0	0	
	23	0	0	0	0			53	0	0	0	0	
	24	0	0	0	0			54	0	5	5	5	WEST ROOF
	25	0	0	0	0			55	0	0	0	5	REDDISH IN
	26	0	0	0	0			56	5	5	0	5	COLOR
	27	0	0	0	0			57	0	0	5	5	
	28	0	0	0	0			58	0	5	5	0	
	29	0	0	0	0			59	0	5	0	5	

Visual Determination of Opacity

FACILITY		DATE
# 2 BOP SHOP ROOF		2-1-18
OBSERVER		Start Time
P. Ruytjans - Vedio water		10:20 AM.
Wind Direction and Speed		End Time
SW 10-20		11:12
Sky Condition		Temp:
P. CLOUDY		37°
OBSERVER'S LOCATION		
NE ~ 120 YDS FROM 2 BOP		

Comments:



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
11:00	0	5	5	10	0			30					
	1	0	5	0	0			31					
	2	5	10	5	0			32					
	3	5	0	5	10			33					
	4	0	0	5	0			34					
	5	0	0	10	5			35					
	6	5	0	0	0			36					
	7	0	0	0	0			37					
	8	0	0	15	10	EAST ROOF		38					
	9	10	5	0	0	REDDISH IN COLOR		39					
	10	50	50	60	60	EAST, CENTER B		40					
	11	40	50	50	40	WEST ROOF		41					
	12	40	35	30	25	BLACK IN COLOR		42					
	13							43					
	14					TAP 11:12		44					
	15					26' 7872		45					
	16							46					
	17							47					
	18							48					
	19							49					
	20							50					
	21							51					
	22							52					
	23							53					
	24							54					
	25							55					
	26							56					
	27							57					
	28							58					
	29							59					

Visual Determination of Opacity

DATE 2-16-18

ACTIVITY # Z BOP SHOP ROOF

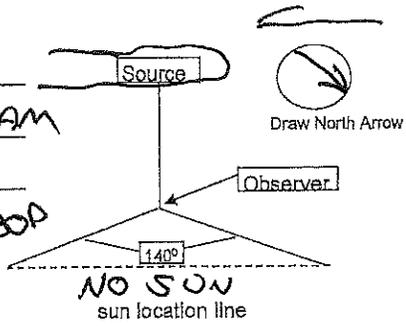
Start Time 9:02 AM End Time 9:53 AM

OBSERVER Kristy Dr - Vodia Water

LOCATION M.P. VSS GLW

Wind Direction and Speed W 10-15 Sky Condition CLOUDY Temp: 32°

OBSERVER'S LOCATION NE 120 YDS FROM Z BOP



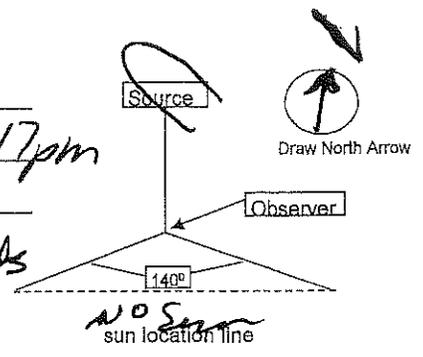
BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						9:30	30	0	0	0	0	
	1							31	0	0	0	0	
9:02	2	0	0	0	0	START V.E.O.		32	0	0	0	0	
9:03	3	0	0	0	0	TAP 25-6614		33	0	5	5	5	CENTER SECTION
	4	0	0	0	0			34	0	5	5	5	EAST SECTION
	5	0	0	0	0			35	10	5	5	0	GREY IN COLOR
	6	0	0	0	0			36	5	5	0	0	
	7	0	0	0	0			37	0	0	0	0	
	8	0	0	0	0			38	5	0	0	5	
	9	0	0	0	0			39	5	5	0	0	
	10	0	0	0	0			40	0	0	0	0	
	11	0	0	0	0			41	0	0	5	5	
	12	0	0	0	0			42	0	0	0	0	
	13	0	0	0	0			43	0	0	5	10	
	14	0	0	0	0			44	5	0	0	0	
	15	0	0	0	0			45	0	0	0	0	
	16	0	0	0	0			46	0	0	0	0	
	17	0	0	0	0			47	5	0	5	10	
	18	0	0	0	0			48	0	0	0	0	
	19	0	0	0	0			49	0	0	0	0	
	20	0	0	0	0			50	0	0	0	0	
	21	0	0	0	0			51	0	0	0	0	
	22	0	0	0	0		9:52	52	0	0	0	0	TAP 25-6615
	23	0	0	0	0	START BLOW	9:53	53	0	0	0	0	END V.E.O.
	24	0	0	0	0	9:28 25-6615		54					
	25	0	0	0	0			55					
	26	0	0	0	0			56					
	27	0	25	25	20	CENTER SECTION		57					
	28	15	5	5	0	GREY IN COLOR		58					
	29	0	0	0	0			59					

Visual Determination of Opacity

ACTIVITY: #2 BOP Shop Roof
 OBSERVER: Paul Bush - Veolia Water
 Wind Direction and Speed: NW 15-20 mph
 Sky Condition: cloudy
 Temp: 32°F

DATE: 3-2-18
 Start Time: 12:35 pm
 End Time: 1:47 pm
 LOCATION: MP 455 GLW
 OBSERVER'S LOCATION: SSE from BOP - 250 yds



BACKGROUND: white clouds/blue sky

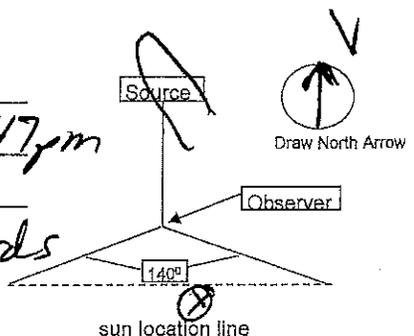
HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
10	0	0	0	0	0		30						
	1	0	0	0	0		31						
	2	0	0	0	0		32						
	3	0	0	0	0		33						
	4	0	0	0	0		34						
	5	0	0	0	0		12:35 35	0	0	0	0	Start Obs.	
	6	0	0	0	0		36	0	0	0	0	26-8305 Start flow	
	7	0	0	0	0		37	0	0	0	0	12:34 pm	
	8	0	0	0	0		38	0	0	0	0		
	9	0	0	0	0		39	0	0	0	0		
	10	0	0	0	0	Center Roof	40	0	0	0	0		
11	11	0	10	20	15	Greenish	41	0	0	0	0		
	12	5	0	0	0	26-8305 Tap @ 13:12	42	0	0	0	0		
	13	0	0	0	0		43	0	0	0	0		
	14	0	0	0	0	25-6750 Start	44	0	0	0	0		
	15	0	0	0	0	Blow @ 13:12	45	0	0	0	0		
	16	0	0	0	0		46	0	0	0	0		
	17	0	0	0	0		47	0	0	0	0		
	18	0	0	0	0		48	0	0	0	0		
	19	0	0	0	0		49	0	0	0	0		
	20	0	0	0	0		12:30 50	0	5	10	15	W Roof Brownish/Reddish	
	21	0	0	0	0		51	10	10	20	20		
	22	0	0	0	0		52	25	30	25	25		
	23	0	0	0	0		53	20	20	15	10		
	24	0	0	0	0		54	10	5	5	10		
	25	0	0	0	0		55	0	0	0	0		
	26	0	0	0	0		56	0	5	5	0		
	27	0	0	0	0		57	0	0	0	0		
	28	0	0	0	0		58	0	0	0	0		
	29	0	0	0	0		59	0	0	0	0		

pg 1 of 2

Visual Determination of Opacity

FACILITY #2 BOP Shop Roof
 OBSERVER Paul Bush - Voolia water
 Wind Direction and Speed WNW 15-20 mph
 Sky Condition Cloudy
 Temp: 34°F

DATE 3-2-18
 Start Time 12:35 pm End Time 1:47 pm
 LOCATION Top 4556 LW
 OBSERVER'S LOCATION SSE from BOP w 250 yds



BACKGROUND

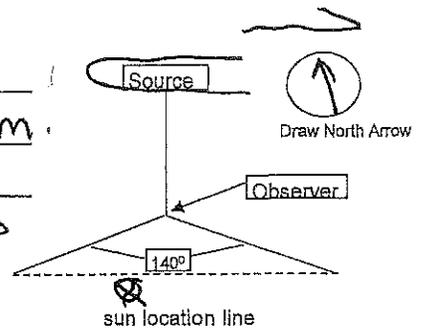
HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						1:30	30	0	0	0	0	
	1							31	0	0	0	0	
	2							32	0	0	0	0	
	3							33	0	0	0	0	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
	10							40	0	0	0	0	
	11							41	0	0	0	0	
	12							42	0	0	0	5	whitish/Grey
	13							43	5	5	15	10	Center Roof
	14							44	5	5	0	0	
	15							45	0	0	0	0	
	16							46	0	0	0	0	Top 25-6750 @
	17						1:47	47	0	0			13:46, End VED
	18							48					
	19							49					
	20							50					
	21							51					
	22							52					
	23							53					
	24							54					
	25							55					
	26							56					
	27							57					
	28							58					
	29							59					

pg 2 of 2

Visual Determination of Opacity

FACILITY
2 BOP SHOP ROOF
 OBSERVER
P. Kuyatich - Vedia wala
 Wind Direction and Speed
W 10-20 Sky Condition
SUNNY Temp:
32°

DATE
3-14-18
 Start Time
1:21 P.M. End Time
2:11 P.M.
 LOCATION
M.P. USS GLW
 OBSERVER'S LOCATION
SE - 140 YDS FROM BOP



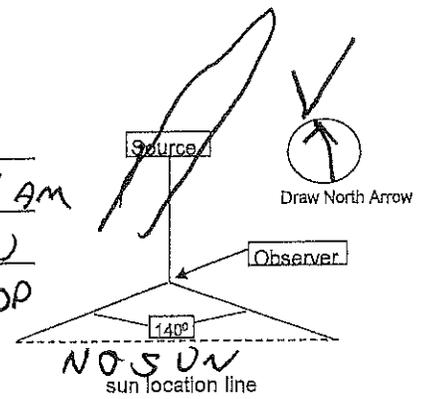
Comments:

BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
2:00	0	0	0	0	0		1:30	30	0	0	0	0	
	1	0	0	0	0			31	0	0	0	0	
	2	0	0	0	0			32	0	0	0	0	
	3	0	0	0	0			33	0	0	0	0	
	4	0	0	0	0			34	0	0	0	0	
	5	0	0	0	0			35	0	0	0	0	
	6	0	0	0	0			36	0	0	0	0	
	7	0	0	0	0			37	0	0	0	0	
	8	0	0	0	0			38	0	0	0	0	
	9	0	0	0	0			39	0	0	0	0	
2:10	10	0	0	0	0	TAP 25-6944		40	0	0	0	0	
2:11	11	0	0	0	0	END V.E.O.		41	0	0	0	0	
	12							42	0	0	0	0	
	13							43	0	0	0	0	
	14							44	0	0	0	0	
	15							45	0	0	0	0	
	16						1:46	46	0	0	0	0	START BLOW
	17							47	0	0	0	0	25-6944
	18							48	0	0	0	0	
	19							49	0	0	0	0	
	20							50	0	0	0	0	
2:21	21	0	0	0	0	START V.E.O.		51	0	0	0	0	
2:22	22	0	0	0	0	TAP 25-6943		52	0	0	0	0	
	23	0	0	0	0			53	0	0	0	0	
	24	0	0	0	0			54	0	0	0	0	
	25	0	0	0	0			55	0	0	0	0	
	26	0	0	0	0			56	0	0	0	0	
	27	0	0	0	0			57	0	0	0	0	
	28	0	0	0	0			58	0	0	0	0	
	29	0	0	0	0			59	0	0	0	0	

Visual Determination of Opacity

DATE 3-29-18
 FACILITY # 2 BOP SHOP ROOF Start Time 10:10 AM End Time 11:05 AM
 OBSERVER P. Kuytjok - Vedio Water LOCATION M. P. USS GLW
 Wind Direction and Speed N 10-15 Sky Condition OVERCAST Temp: 39° OBSERVER'S LOCATION SE ~ 140 YDS FROM BOP



BACKGROUND

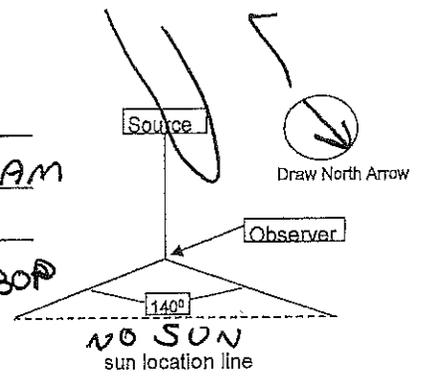
HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
10:00	0	0	0	0	0		10:30	30	0	0	0	0	
10:01	1	0	0	0	0	TAP 26-8716		31	0	0	0	0	
	2	0	0	0	0			32	0	0	0	0	
	3	0	0	0	0			33	0	0	0	0	
	4	0	0	0	0			34	0	0	0	0	
10:05	5	0	0	0	0	END V.E.O.		35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
10:10	10	0	0	0	0	START V.E.O.	10:40	40	0	0	0	0	START BLOW
10:11	11	0	0	0	0	TAP 26-8715		41	0	0	0	0	26-8716
	12	0	0	0	0			42	0	0	0	0	
	13	0	0	0	0			43	0	0	0	0	
	14	0	0	0	0			44	0	0	0	0	
	15	0	0	0	0			45	5	5	0	5	WEST END
	16	0	0	0	0			46	5	10	10	0	GREY IN COLOR
	17	0	0	0	0			47	5	5	5	10	
	18	0	0	0	0			48	0	0	5	5	
	19	0	0	0	0			49	5	10	10	10	WEST END
	20	0	0	0	0			50	10	10	10	15	REDDISH IN COLOR
	21	0	0	0	0			51	10	10	15	15	
	22	0	0	0	0			52	25	25	25	25	
	23	0	0	0	0			53	25	25	25	25	
	24	0	0	0	0			54	30	35	30	20	
	25	0	0	0	0			55	25	30	15	15	
	26	0	0	0	0			56	15	10	20	10	
	27	0	0	0	0			57	15	10	10	5	
	28	0	0	0	0			58	5	5	5	0	
	29	0	0	0	0			59	0	0	0	0	

Visual Determination of Opacity

DATE 4-13-18
 Start Time 9:10 AM End Time 9:54 AM
 LOCATION M.P. USS GLW
 OBSERVER'S LOCATION NE 150 YDS FROM 2 BOP

Facility # 2 BOP SHOD ROOF
 Observer Krydyak - Veolia Water
 Wind Direction and Speed N 10-15 Sky Condition CLOUDY Temp: 40°

Comments: WIND DIR CHG E 10-15



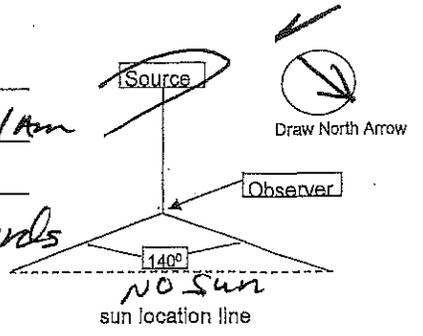
BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						9:30	30	0	0	0	5	START BLOW
	1							31	5	5	10	5	9:29
	2							32	5	5	5	5	26-9032
	3							33	0	0	5	5	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
9:10	10	0	0	0	0	TAP 26 - 9031		40	0	0	0	0	
	11	0	0	0	0			41	0	0	0	0	
	12	0	0	0	0			42	5	5	0	5	WEST ROOF
	13	10	5	0	0			43	0	0	0	0	GREY IN COLOR
	14	0	0	0	0			44	0	5	0	5	
	15	20	25	0	0	EAST END		45	0	0	0	0	
	16	0	25	5	10	GREY IN COLOR		46	0	0	0	0	
	17	0	25	15	0			47	0	0	0	0	
	18	0	0	10	5			48	0	0	0	0	
	19	10	5	5	5			49	0	0	0	0	
	20	5	5	10	0			50	10	15	0	0	
	21	5	5	10	10	EAST & WEST		51	0	0	0	0	
	22	5	10	10	10	GREY IN COLOR		52	0	0	0	0	
	23	10	5	5	5		9:53	53	0	0	0	0	TAP 26 - 9032
	24	5	5	5	5		9:54	54	0	0	0	0	END V.E.O.
	25	5	5	5	5			55					
	26	5	0	0	0			56					
	27	0	0	0	0			57					
	28	30	35	30	30	WEST ROOF		58					
	29	25	15	10	0	GREY IN COLOR		59					

Visual Determination of Opacity

ACTIVITY #2 BOP Roof
 OBSERVER Paul Bush - Veolia Water
 Wind Direction and Speed 2-15-20 mph overcast
 Sky Condition overcast
 Temp: 52°F

DATE 4-25-18
 Start Time 8:55 AM End Time 9:41 AM
 LOCATION MP USSGLW
 OBSERVER'S LOCATION NE from BOP ~ 150 yds



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
7:00	0	0	0	0	0								
	1	0	0	0	0								
	2	0	0	0	0								
	3	0	0	0	0								
	4	0	0	0	0								
	5	0	0	0	0								
	6	0	0	0	0								
	7	0	0	0	0								
	8	0	0	0	0								
	9	0	0	0	0								
	10	0	0	0	0								
	11	0	0	0	0								
	12	0	0	0	0								
	13	0	0	0	0								
	14	0	0	0	0								
	15	0	0	0	0								
	16	0	15	25	20	Bluish/Greenish							
11:17	17	30	25	20	0	Start Blw 9:17							
	18	0	0	0	0	26-9309							
	19	0	0	0	0								
	20	0	0	0	0								
	21	0	0	0	0								
	22	0	0	0	0								
	23	0	0	0	0								
	24	0	0	0	0								
	25	0	0	0	10	Reddish Chr Roof 8:55	55	0	0	0	0	Start VED	
	26	20	15	10	15	near 26V.	56	0	0	0	0	26-9308 Tap	
	27	10	15	10	5		57	0	0	0	0	8:56 Tap	
	28	10	15	10	10		58	0	0	0	0		
	29	10	0	0	10		59	0	0	0	0		

pg 1 of 2

Visual Determination of Opacity

DATE **4-25-18**

FACILITY **#2 BOP Roof**

Start Time **8:55 AM** End Time **9:41 AM**

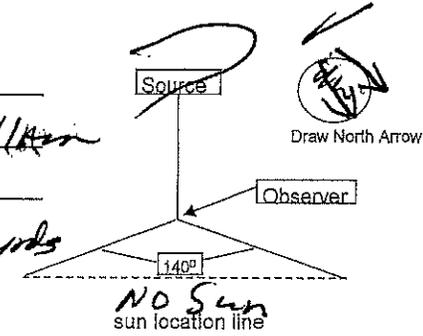
OBSERVER **Paul Bush Veolia Water**

LOCATION **MP USSGLW**

Wind Direction and Speed **15-20 mph** Sky Condition **overcast** Temp: **52°F**

OBSERVER'S LOCATION **NE from BOP ~ 150 yds**

Comments:



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						9:30	30	5	5	5	5	
	1							31	10	10	5	5	
	2							32	5	5	10	5	w. Roof
	3							33	10	10	15	40	Reddish
	4							34	30	20	20	20	90
	5							35	20	15	10	10	55
	6							36	5	5	10	10	
	7							37	5	5	0	0	9:37 Blow Stop
	8							38	0	0	0	0	
	9							39	0	0	0	0	
	10							40	0	0	0	0	
	11						9:41	41	0	0	0		End VEO
	12							42					Tap @ 9:41
	13							43					
	14							44					
	15							45					
	16							46					
	17							47					
	18							48					
	19							49					
	20							50					
	21							51					
	22							52					
	23							53					
	24							54					
	25							55					
	26							56					
	27							57					
	28							58					
	29							59					

pg 2 of 2

Visual Determination of Opacity

DATE

5-9-18

ACTIVITY
2 BOP SHOP ROOF

Start Time 12:50 P.M. End Time 1:58 P.M.

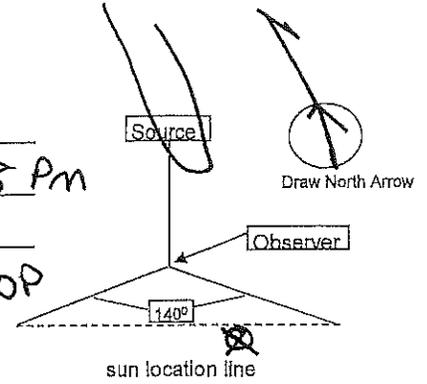
OBSERVER
P. Kuytjok - Vedia Water

LOCATION
M.P. VSS GLW

Wind Direction and Speed S 10-15 Sky Condition CLOUDY Temp: 78°

OBSERVER'S LOCATION
SE 140 YDS FROM BOP

Comments:



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
12:00	0	0	0	0	0			30					
	1	0	0	0	0			31					
	2	0	0	0	0			32					
	3	0	0	0	0			33					
	4	0	0	0	0			34					
	5	0	0	0	0			35					
	6	0	0	0	0			36					
	7	0	0	0	0			37					
	8	0	0	0	0			38					
	9	0	0	0	0			39					
	10	0	0	0	0			40					
	11	0	0	0	0			41					
	12	0	0	0	0			42					
	13	0	0	0	0			43					
12:14	14	0	0	0	0	START BLOW		44					
	15	0	0	5	5	26-9553		45					
	16	5	0	10	0	WEST ROOF		46					
	17	0	0	0	0	RED IN COLOR		47					
	18	0	0	0	0			48					
	19	0	0	0	0			49					
	20	0	0	0	0		12:50	50	0	0	0	0	START V.E.O.
	21	0	0	0	0		12:51	51	0	0	0	0	TAP 26-9552
	22	0	0	5	5	WEST ROOF		52	0	0	0	0	
	23	5	5	0	0	RED IN COLOR		53	0	0	0	0	
	24	0	5	0	0			54	0	0	0	0	
	25	0	0	0	0			55	0	0	0	0	
	26	5	5	0	0			56	0	0	0	0	
	27	0	0	0	0			57	0	0	0	0	
	28	0	0	0	0			58	0	0	0	0	
	29	0	0	5	5			59	0	0	0	0	

Page 1 of 2

Visual Determination of Opacity

DATE 5-9-18

FACILITY # 2 BOP SHOP ROOF

Start Time 12:50 P.M. End Time 1:58 P.M.

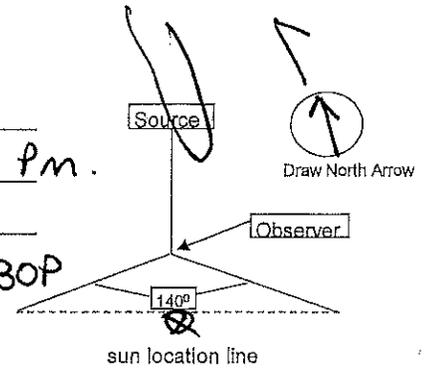
OBSERVER P. Krystjok - Verdia Water

LOCATION M.P. USS GLW

Wind Direction and Speed S 10-15 Sky Condition CLOUDY Temp: 78°

OBSERVER'S LOCATION SE 140 YDS FROM BOP

Comments:



BACKGROUND

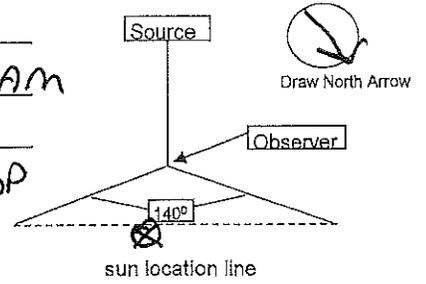
HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
2:00	0						1:30	30	5	10	0	0	WEST ROOF
	1							31	0	0	0	0	
	2							32	0	0	0	0	
	3							33	0	0	0	0	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	10	10	10	5	WEST ROOF
	9							39	5	10	10	5	RED IN COLOR
	10							40	5	0	0	0	
	11							41	0	0	0	0	
	12							42	0	0	0	0	
	13							43	0	0	0	0	
	14							44	0	0	0	0	
	15							45	0	0	0	0	
	16							46	0	0	0	0	
	17							47	0	0	0	0	
	18							48	0	0	0	0	
	19							49	0	0	0	0	
	20							50	0	0	0	0	
	21							51	0	0	0	0	
	22							52	0	0	0	0	
	23							53	0	0	0	0	
	24							54	0	0	0	0	
	25							55	0	0	0	0	
	26							56	0	0	0	0	
	27						1:57	57	0	0	0	0	TAP 26 - 9553
	28						1:58	58	0	0	0	0	END V.E.O.
	29							59					

Visual Determination of Opacity

DATE 5-24-18
 Start Time 8:38 AM End Time 9:29 AM

FACILITY # 2 BOP SHOP ROOF
 OBSERVER P. Kuydjok - Noelia Water
 Wind Direction and Speed CALM Sky Condition SUNNY Temp: 65°

LOCATION M. P. USS GLW
 OBSERVER'S LOCATION NE 140 YDS FROM BOP



Comments:

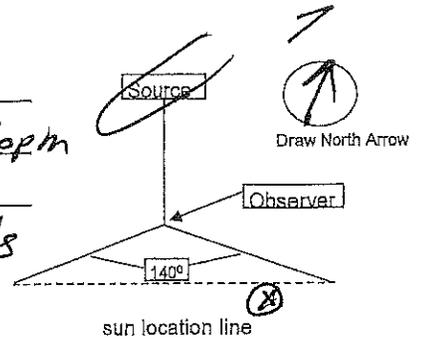
BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
1:00	0	0	0	0	0		30						
	1	5	5	5	10	CENTER & WEST	31						
	2	10	10	15	15	SECTION OF ROOF	32						
	3	15	15	15	15	GREY IN COLOR	33						
	4	15	10	10	5	9:03	34						
	5	5	5	5	0	START BLOW	35						
	6	0	0	0	0	26-9779	36						
	7	0	0	0	0		37						
	8	0	0	0	0		8:38 38	0	0	0	0	START V.E.O.	
	9	0	0	0	0		8:39 39	0	0	0	0	TAP 26-9778	
	10	0	0	0	0		40	0	0	0	0		
	11	0	0	0	0		41	0	0	0	0		
	12	0	0	0	0		42	0	0	0	0		
	13	0	0	0	0		43	0	0	0	0		
	14	0	0	5	5		44	0	0	0	0		
	15	5	0	0	0		45	0	0	0	0		
	16	0	0	0	0		46	0	0	0	0		
	17	0	0	0	0		47	0	0	0	0		
	18	0	0	0	0		48	0	0	0	0		
	19	0	0	0	0		49	0	0	0	0		
	20	0	0	0	0		50	0	0	0	0		
	21	0	0	0	0		51	0	0	0	0		
	22	0	10	10	15	WEST ROOF	52	0	0	0	0		
	23	15	10	10	10	GREY IN COLOR	53	0	0	0	0		
	24	5	5	0	0		54	0	0	0	0		
	25	0	0	0	0		55	0	0	0	0		
	26	0	0	0	0		56	0	0	0	0		
1:27	27	0	0	0	0	TAP 26-9779	57	0	0	0	0		
	28	15	25	25	25	CENTER & EAST	58	0	0	0	0		
1:29	29	20	10	0	0	END V.E.O.	59	0	0	0	0		

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Visual Determination of Opacity

DATE 6.7-18
 FACILITY #2 BOP Shop Roof
 OBSERVER Raul Bush - Media Water
 Wind Direction and Speed S 10-15 mph Sky Condition Sunny Temp: 78°F
 Start Time 1:30 pm End Time 2:16 pm
 LOCATION 7MP USSGLW
 OBSERVER'S LOCATION SE from BOP ~ 120 yds



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
2:00	0	0	0	0	0		1:30	30	0	0	0	0	Start VEO
	1	0	0	0	0			31	0	0	0	0	Tap 26-0010
	2	0	0	0	0			32	0	0	0	0	1:31 pm
	3	0	0	0	0			33	0	0	0	0	
	4	0	0	0	0			34	0	0	0	0	
	5	0	0	0	0			35	0	0	0	0	
	6	0	0	0	0			36	0	0	0	0	
	7	0	0	0	0			37	0	0	0	0	
	8	0	0	0	0			38	0	0	15	15	whitish
	9	0	0	0	0			39	25	20	15	15	W of 26 Vessel
2:10	10	0	15	15	25	Sand Seal ? 26 V		40	20	15	20	20	
	11	20	20	10	10			41	5	5	5	5	
	12	0	0	0	0			42	5	0	0	0	E-leaf
	13	0	0	0	0			43	0	0	15	25	yellowish
	14	0	0	0	0			44	15	10	20	10	
	15	0	0	0	5			45	0	0	0	0	
2:16	16	5	5	10	5	2:16 Tap		46	0	0	0	0	
	17					26-0011		47	0	0	0	0	
	18					End VEO		48	0	0	0	0	1:48 Hmc
	19							49	0	0	0	0	
	20							50	0	0	0	0	
	21							51	0	0	0	0	1:51 Start Blow
	22							52	0	0	0	0	26-0011
	23							53	0	0	0	0	
	24							54	0	0	0	0	
	25							55	0	0	0	0	
	26							56	0	0	0	0	
	27							57	0	0	0	0	
	28							58	5	5	0	0	
	29							59	0	0	0	0	

Visual Determination of Opacity

DATE

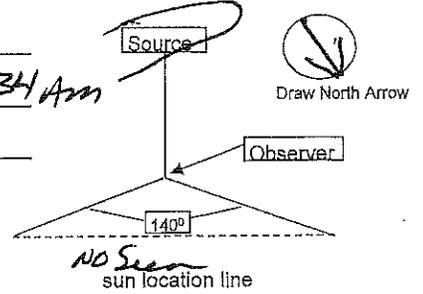
6-22-18

FACILITY: *BOP Shop Roof*
 OBSERVER: *Paul Bush - Veolia Water*

Start Time: *9:47 AM* End Time: *10:34 AM*
 LOCATION: *MP USS GLW*

Wind Direction and Speed: *E 5-10 mph* Sky Condition: *overcast* Temp: *69°F*

OBSERVER'S LOCATION: *NE from BOP ~150 yds*



BACKGROUND

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
10:00	0	0	0	0	0		10:30	30	0	0	0	5	
	1	0	0	0	0			31	0	0	0	0	<i>Stop Blow</i>
	2	0	0	0	0			32	0	0	0	10	<i>10:31</i>
	3	0	0	0	0			33	5	0	0	0	
	4	0	0	0	0		10:34	34	0	0	0	0	<i>Tap 26-0234</i>
	5	0	0	0	0			35	0				<i>10:34 Tap</i>
	6	0	0	0	0			36					<i>End VEO</i>
	7	0	0	0	0			37					
	8	0	0	0	0			38					
	9	0	0	0	0	<i>Start Blow 10:10 AM</i>		39					
	10	0	0	10	10	<i>E of 26 Birchwood Stk</i>		40					
	11	5	10	10	5			41					
	12	0	0	10	5	<i>grayish / Brn</i>		42					
	13	0	0	0	0			43					
	14	0	5	15	10			44					
	15	10	15	10	10			45					
	16	15	15	10	20			46					
	17	10	10	10	5		9:47	47	0	0	0	0	<i>Start VEO</i>
	18	5	15	5	20			48	0	0	0	0	<i>Tap 26-</i>
	19	5	10	10	0			49	0	0	0	0	
	20	0	0	15	0			50	0	0	0	0	
	21	10	20	15	15			51	0	0	0	0	
	22	25	0	10	0			52	0	0	0	0	
	23	0	0	0	0			53	0	0	0	0	
	24	0	10	0	0			54	0	0	0	0	
	25	0	0	0	10			55	0	0	0	0	
	26	15	5	5	10			56	0	0	0	0	
	27	15	5	5	10			57	0	0	0	0	
	28	10	15	15	10			58	0	0	0	0	
	29	5	10	5	0			59	0	0	0	0	

